

REMARKS

Claim 4 is cancelled. New claims 29-32 are added. No new subject matter is introduced. Claims 1, 2, 3, 5, 6, 8-21, and 29-32 are now pending in the case. Reconsideration and allowance of the pending claims is requested in light of the following remarks.

Claim Rejections Under 35 USC §103

Claims 1, 5, 6, 8-14, 16 and 21 were rejected under 35 USC 103(a) as being unpatentable over JP 58152737 to Takahashi ("Takahashi") in view of US 2002/0124536 to Sting et al. ("Sting"). The applicant respectfully traverses the rejection. However, to further prosecution, the claims have been further amended.

Claim 1 has been amended to recite:

wherein the drive rollers, idle roller and one or more belts are further configured to: move a document from a feed-in path to a feed-out path,

wherein a direction of the feed-in path and a direction of the feed-out path are both substantially parallel to each other and also parallel to a direction of the force exerted by the elastic member on the idle roller; and

receive the document from the feed-in path, transport the document substantially 180 degrees around the same idle roller, and output the document from the same idle roller to the feed-out path.

Neither Takahashi, Sting, nor any of the other references cited by the examiner, suggest the elements recited in claim 1. Takahashi in FIG. 2 shows a mechanism that includes a roller 13 that is pulled to the left against a belt 12 by a spring 19. A direction of the feed-in path b and a direction of the feed-out path in Takashahi are not substantially parallel to each other as recited in claim 1 and therefore any force exerted by spring 19 on the roller 13 could not be parallel to both a feed-in and feed-out document path as also recited in claim 1.

Further, the roller 13 in Takashahi only bends the document 21 90 degrees in an upward direction for further movement by a second roller 14. Even the additional second roller 14 in Takahashi still only moves the document another 45 degrees. Thus, the two idle roller system in Takahashi only moves a document a total of 135 degrees.

Accordingly, Takashi also does not have a mechanism as further recited in claim 1 *wherein the drive rollers, idle roller and one or more belts are further configured to: move a*

document from a feed-in path to a feed-out path, wherein a direction of the feed-in path and a direction of the feed-out path are both substantially parallel to each other and also parallel to a direction of the force exerted by the elastic member on the idle roller; and receive the document from the feed-in path, transport the document substantially 180 degrees around the same idle roller, and output the document from the same idle roller to the feed-out path.

The spring 19, roller 13, and belt 12 arrangement in Takahashi can only turn a document 90 degrees. Accordingly, the additional rollers 14, 9, and 7 are required and still can only move the paper another 45 degrees. Thus, the document transport mechanism in Takahashi requires more rollers, uses substantially more space, and as a result limits size reduction for a scanner or printer.

For at least these reasons, claim 1 is allowable under 35 USC 103(a) over JP 58152737 to Takahashi ("Takahashi") in view of Sting.

Claim 2 recites: *idle roller is configured to press against the one or more belts so that the document bends around the idle roller in a direction away from the one or more belts.*

None of the art cited by the Examiner suggests asserting a force on a document while be transported on a belt so that the document bends around the idle roller and in a direction away from the belt as recited in claim 2. All of the cited art tries to keep documents pressed up against the belt. For example, Ota in FIG. 3B shows a document A that continues to press against belt 54 even after moving away from roller 52. Similarly, Takashi in FIG. 2 shows that a document 21 would necessarily continuously press against the belt 12 due to the pressure asserted by the two rollers 13 and 14 against the document 21.

Thus, both Ota and Takashi teach away from *idle roller is configured to press against the one or more belts so that the document bends around the idle roller in a direction away from the one or more belts.*

For at least these reasons, claim 2 is allowable under 35 USC 103(a) over JP 58152737 to Takahashi ("Takahashi") in view of Sting.

Claims 15 and 17-20 were rejected under 35 USC 103(a) as being unpatentable over Takahashi in view of Sting and US 6,309,064 to Tanno ("Tanno"). The applicant respectfully traverses the rejection. However, claim 17 has been amended to further distinguish over the cited art as follows:

substantially only one side of the idle roller contacts the belt and exerts the force from the elastic member against the one or more belts, the force exerted from the idle roller on the

one or more belts being in a document feed-in path direction and opposite to a document feed-out path direction.

Conversely, FIG. 3 of Ota shows the belt 54 contacting two sides of roller 52. For at least these reasons, claim 17 is allowable under 35 USC 103(a) over Takahashi in view of Sting and Tanno.

Claim 29 has been added and recites:

asserting an elastic force against an idle roller causing the idle roller to press against the belt at a tangential contact location on the belt that is substantially perpendicular to the elastic force asserted against the idle roller; and
asserting the elastic force against the belt via the idle roller so that a document transported by the belt partially bends around the idle roller while the document at the same time partially separates away from the belt.

The tangential contact location recited in claim 29 is also contrary to the conveyer system shown in FIG. 3 of Ota where the belt 54 also wraps around a 45 degree corner of roller 52 and presses against two sides of roller 52. Also notice in Ota where the document A constantly presses against the belt 54 and cannot partially wrap around the roller 52. For at least these reasons, claim 29 is allowable over the cited references.

Claim 16 has at least some elements similar to claim 29 and therefore is patentable for at least some of the same reasons as claim 29.

In addition to the other recited elements, claim 10 specifies *three drive rollers arranged in a triangular formation.*

The Examiner in the previously received office action recognized at page 3 that both Takahashi and Sting did not disclose either three drive rollers or a triangular formation for the drive rollers. However, the Examiner alleged that the triangular drive roller feature “appears to be merely a matter of design choice and modifying Takahashi to have three drive rollers instead of two or having a triangular formation, as taught by Ota, would have been obvious to one of ordinary skill in the art.”

Ota fails to disclose three drive rollers arranged in a triangular configuration. Rather, Ota’s abstract specifically discloses just two rollers - “a tension roller 58” and “roller 52.” Even if both of Ota’s rollers 52, 58 could be considered drive rollers as recited in claim 10,

there would have to be at least one more drive roller present to suggest a triangular configuration.

Thus, at least because none of Takahashi, Sting, or Ota disclose the feature of three drive rollers arranged in a triangular configuration, the combination fails to establish *prima facie* obviousness. MPEP 2143.03.

As for the allegation that the recited feature of “three drive rollers arranged in a triangular configuration” is “merely a matter of design choice” and “modifying Takahashi ... would have been obvious to one of ordinary skill,” MPEP 2144.04(V)(C) states that “[t]he mere fact that that a worker in the art could rearrange the parts of the reference device to meet the terms of the claims ... is not by itself sufficient to support a finding of obviousness. The prior art must provide a motivation or reason for the worker in the art, without the benefit of the ... specification, to make the necessary changes in the reference device.”

The office action fails to identify any suggestion or motivation found in the prior art to modify Takahashi’s mechanism to meet the features of claim 1. For this additional reason, the combination of Takahashi, Sting, and Ota fails to establish *prima facie* obviousness of claims 10 and 18. MPEP 2143.

The previous office action also suggests at page 4 that the triangular drive wheel feature is disclosed by Fig. 2 of Tanno. However, Tanno Fig. 2 fails to disclose any structure that has a triangular configuration. It is assumed that the office action intended to refer to Tanno Figs. 5 and 6, which shows a driving roller 17, a transporting roller 18, and a pressure roller 19 (column 7, lines 37-39). Even if Tanno’s transporting roller 18 and pressure roller 19 could be considered a drive roller as recited in claim 17, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. MPEP 2143.01. The office action does not identify any suggestion of desirability found in the prior art that would motivate one of ordinary skill to modify Takahashi in the manner that is suggested.

For at least this reason, a *prima facie* case of obviousness for claims 10 and 18 has not been established. MPEP 2143.

Claim 5 has been amended to further recite: *a first one of the drive rollers is located above the idle roller; a second one of the drive rollers is located below the idle roller; and a third one of the drive rollers is co-linearly aligned with the direction of the force exerted by the idle roller.*

None of the mechanisms disclosed in Takahashi, Sting, or Ota suggest *a first one of the drive rollers is located above the idle roller; a second one of the drive rollers is located*

below the idle roller; and a third one of the drive rollers is co-linearly aligned with the direction of the force exerted by the idle roller.

Regarding claim 11, neither Takahashi nor Ota teach *a spring fixed at one end to the shaft of the idle roller and fixed at a second end to the body, the spring configured to push out from the body against the idle roller.* Takahashi only shows a spring 18 that pulls against roller 13.

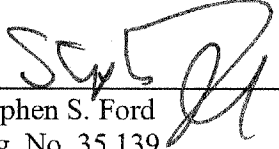
For at least these reasons, claim 11 is allowable under 35 USC 103(a) over JP 58152737 to Takahashi ("Takahashi") in view of Sting.

Conclusion

The claims are allowable for at least the reasons indicated above, but may also be allowable based on other features and for other reasons. Reconsideration and allowance of the pending claims is requested. Please telephone the undersigned at (503) 224-2170 if it appears that an interview would be helpful in advancing the case.

Respectfully submitted,

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